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Before the

CALIFORNIA ENERGY COMMISSION

FUELS AND TRANSPORTATION COMMITTEE

Comments on the Possible Impacts of MTBE Phase Out On Gasoline Supplies

Submitted by Thomas A Schmitz
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COMMENTS ON THE POSSIBLE IMPACTS OF MTBE PHASE OUT ON GASOLINE SUPPLIES

Introduction and Qualifications

My name is Thomas A. Schmitz. I am the President of **TASC**onsulting with offices in Chevy Chase, Maryland. I offer economic and management consulting services focusing on transportation, logistics, and supply chain management.

I have been continuously employed in the transportation and logistics field for the past 28 years. During this period, I have offered consulting services pertaining to transportation by railroads and motor carriers, as well as barges along the inland waterways, coast-wise ships, and domestic and international intermodal shipping via non-US flag steamships. While I am proficient in all of these areas, I am a recognized expert in the area of railroad pricing, cost-of-service, and operations.

I have been employed in several capacities at the former Interstate Commerce Commission (now the federal Surface Transportation Board); notably as Chief of the Cost and Financial Analysis Section, and most recently as the Chief Economist for that Agency. In that role, I was responsible for the staff recommendation to the Commissioners relating to their approval of rail mergers, abandonments, track construction, etc. based on the likely impacts of those events on the adequacy of rail service to the public and the impact on rail transportation rates in affected markets.

Likewise, I have provided consulting services to A.E. Staley, Minnesota Corn Processors, ADM and others and recently completed an assignment for the largest grain cooperative in Queensland, Australia. Further, I have represented the interests of the Port Authority of New York and New Jersey and the Port of Vancouver, BC. I examined both East and West coast port competition and congestion as well as the expected growth of intermodal import and export traffic on throughput productivity and on the local distribution of traffic to and from those parts via railroads and motor carriers.

Thus, my background allows me to take a holistic view of the infrastructure and supply chains that will be required to transport ethanol from Midwest producers into California. My resume is attached as Appendix A.

Recommendations

- Commercial agreements and investments to ensure an adequate supply of ethanol into California have been hampered by the lack of regulatory certainty. CEC should reconsider the original motivations for the ban of MTBE in light of the uncertainty surrounding ethanol logistics.

  During the period of a possible extension, a rigorous study should be initiated to identify and address the numerous and complex transportation and logistical bottlenecks associated with deliveries of ethanol from the Midwest (PADD II) to California.

- After completion of these further study efforts, and well in advance of the final deadline, actions should be taken to facilitate and promote commercial agreements between ethanol producers, terminal operators, refiners, and transportation providers that will resolve the gasoline supply and logistical bottlenecks that CEC has identified.

- Because it is likely that a logical and efficient sequence of numerous and complex interrelated commitments, operating agreements and investments among ethanol market participants will be required to ensure the development of the ethanol industry and the formation of reliable supply chains to move it to new markets, there is tremendous risk that the ethanol market will not evolve sufficiently to be able to deliver sufficient ethanol to California on a future date certain. If the State decides to postpone the effective date, but proceeds with the MTBE ban, a schedule should be created for periodic receipt and analysis of detailed certifications that outline the actions that ethanol market participants have taken to ensure timely and safe compliance with the ban. Because supply is driven by demand, the submission of data from ethanol producers, terminal operators, and transportation carriers and other necessary participations in the supply chain should be coordinated with the refiners (individually or collectively) in the context of the laters' expected plans for the procurement of ethanol, as well as the procurement of additional gasoline supplies that will be required to replace MTBE.

A regulatory process like the one recommended above, is critically important to reinforce the certainty of California's position on fuel oxygenates, ensure timely compliance, and assure California consumers of a smooth transition from MTBE to ethanol. It is incumbent upon the State of California to study the critical issues that have been identified and to develop a schedule that will protect the public interest.

Overview of Comments

During the recent hearing held in Sacramento on February 19, 2002, Stillwater Associates, delivered a summary of their recommendation to postpone the MTBE ban in California for a sufficient period of time to allow actions to be taken to avoid projected gasoline supply shortfalls and the subsequent price volatility such shortages would create.

Those predicted shortfalls arise from a series of factors including the volumetric differential between MTBE and ethanol as fuel additives, but this is only part of the reason to be concerned about gasoline shortages and price volatility. The other half of the equation is a timely, reliable, economic, and safe supply of ethanol at appropriate locations in California markets.

Because it was necessary to develop a reasonable scope for their study, Stillwater took the availability of ethanol necessary to supply the needs of California as a "given". I do not fault Stillwater for making this assumption in order to draw reasonable boundaries around their work effort and I otherwise found their methodology and approach, analysis, conclusions and rationale compelling.

While the study only addressed some of the logistics impacts of an MTBE ban, noting insufficient terminal capacity and blending apparatus, congestion at California's ports, and the questionable availability of Jones Act and OPA tankers, a more exhaustive list of supply chain issues affecting a reliable stream of ethanol should be completed.

The purpose of my comments is to highlight for the Commission the danger of assuming ethanol supplies are a *fait accompli*. There are two necessary components for an adequate supply of ethanol; namely, sufficient production capacity and reliable transportation and logistics. I am not competent to address the former, but I am well qualified with respect to the later.

Comments and Observations

Of course CEC has recognized that ethanol logistics must be in place as a necessary prerequisite for a successful MTBE Phase Out (See: the presentation materials of Gordon Schremp at the recent hearing). CEC has already identified many of the most significant ethanol logistics factors that will require resolution; for example, sufficient unit-train off-loading facilities, adequate storage tank capacity at receiving points, the likely necessity for "hub and spoke" distribution by motor carriers within California, and the need to split deliveries of ethanol between vessel receipts on the coast and railroad deliveries at selected terminals.

However, I am unaware of any comprehensive effort by the Commission to assure that responsible parties (refiners, ethanol producers and terminal operators) are actually making the necessary infrastructure investments and

developing the types of supply chain contracts and commitments that will ensure a reliable, safe, economically stable, and sufficient stream of ethanol.

Such an effort is just as important to a successful Phase Out of MTBE as is the resolution of the gasoline shortfalls projected by Stillwater Associates. Without coordination, fragmented efforts by refiners, producers, terminal operators, and transportation providers might not develop the ethanol market to a degree that it can deliver California's needed supply of ethanol for some time.

Alternatively, such fragmented efforts might well result in incomplete (or inefficiently located) infrastructure, inadequate inventories due to a failure to sufficiently understand (or control) a myriad of supply chain bottlenecks, inadequate transportation assets, and/or ill-conceived, unsafe, and unreliable operating plans in any of the transportation links that are necessary to deliver ethanol to California. Any of these events could result in a total inability to meet ethanol requirements on the required date, or trigger a complete breakdown in the supply chain during the transition period, leading to the same types of gasoline shortages and price volatility as those predicted by Stillwater.

An unanticipated increase in demand for transportation and other logistics services in one supply chain, which is due to the operational inadequacy and/or cost of service via a competing supply chain, will likely result in short run capacity constraints, delays, and increased costs in the supply chain with the unexpected demand. Of course a free market will evolve and eventually adjust itself over time, but until it does there will be disruptions and shortages of ethanol leading to price volatility in the cost of gasoline at the pump.

However, given the "all or nothing" regulatory and practicality requirements for oxygenated gasoline in California (either all MTBE or all ethanol), it is unreasonable to assume that, without coordination, oversight, and the certainty of demand, that the evolution of the ethanol market and required supply chains will evolve in a manner that can deliver sufficient quantities of ethanol on a date certain in an economical, reliable, and safe fashion.

One if by Land, Two if by Sea

The famous signal expected by Paul Revere is likewise important in this case. Ethanol is coming! Ethanol is coming! Forewarned as to the type of invasion (deliveries) to expect, the State of California can prepare its defenses (infrastructure) appropriately.

I believe the most significant example of possible unintended consequences that could result from an uncoordinated logistics plan is the development and location of sufficient storage and blending facilities (and attendant infrastructure) within California. Without a complete and accurate understanding of the demand for service I fear investors will refuse to make capital available, or will risk their best guess for the location and size of terminal facilities. This is not good enough!

Decisions on the location, size, type and amount of on-site transportation infrastructure needed, and the local distribution plan for each of those facilities, will largely be based on the modal split of ethanol deliveries to California between vessel and railroad. Another key factor in determining the size and location of storage is the potential impact of seasonality factors. If ethanol producers are making fructose in the summer rather than ethanol[1], than the demand for ethanol must be filled during the remaining portion of the year. This will necessitate storage at origins, destinations, or staging areas and potentially lead to uneven receipts of product during peak production times; thus, requiring a greater inventory. Similarly, there is a great potential for winter weather to impact the transportation of ethanol by barge on the Upper Mississippi or by railcar across the mainline central corridor via the Union Pacific Railroad, or across the northern tier mainline via the Burlington Northern Santa Fe Railway. These factors would also compel a greater safety stock in inventory; requiring greater storage capacity.

Accordingly, capital projects for creating sufficient, appropriately located, tank storage will not likely be started until investors are reasonably confident that they understand the amount ethanol (and the transportation schedules and traffic lanes) that will be delivered by each mode of transportation. Only then can investors estimate the expected utilization of those assets.

Similarly, refiners or other responsible parties will not develop detailed plans for the distribution of ethanol from hub to spoke tanks until they can understand the requirements for such service, i.e. the location and magnitude of rail and vessel receiving points.

Following this reasoning, CEC should move away from its focus on California's infrastructure and study the impact of key factors on the demand for, and supply of transportation services by mode. For example, factors such as the relative capacity, reliability, safety, and delivered price per gallon for vessel should be estimated, versus railroad delivery of ethanol, into each of California's major markets. To make these determinations, the study will have to move back through the supply chain to determine the likely locations for the origination (consolidation points) of ethanol destined for California markets. In reality, ethanol market participants will have to move forward and back through their supply chain analyses in a linear program fashion; optimizing supply chain links with each ensuing assumption and firm procurement commitment or capital investment.

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[1] Summer is the high demand period for fructose by Coca-Cola and Pepsi as well as for ethanol in California according to comments made in the recent hearing.

For example, aside from those logistical concerns that have already been identified as critical to waterborne delivery of ethanol to the California coast[2], one might conclude that because the required volume of ethanol is only half the current volume of the MTBE it is replacing, that there will be excess capacity freed up for that portion of MTBE that is currently delivered by vessel and therefore, the resolution of those earlier concerns is sufficient to assure a reliable supply of waterborne ethanol. Nothing could be farther from the truth!

There are significant differences between the relatively simplistic supply chain that currently delivers waterborne MTBE (largely from Gulf Coast producers located directly on or near the water) and the complex intermodal supply chain that would deliver ethanol down the Mississippi River[3] to vessel staging areas in New Orleans. Unrealistic assumptions about the efficacy of operations, the availability and productivity of transportation assets and capacity of the River and its locks, or the ultimate cost of services related to any of those supply chain components, could lead to a surplus or shortage of inventory at many different points along the supply chain.

Since the total supply chain (from PADD II to California) must function in an integrated fashion, each subsequent link dependent on the integrity of the preceding one, sophisticated analysis will generate solid commitments (ie, take or pay contracts) in order for the subsequent transportation and terminal storage providers to understand the demand for their services in their supply chain link. This will enable appropriate infrastructure projects to proceed, and necessary transportation and distribution plans to be developed at barge terminal loading facilities on the Upper Mississippi River, terminal staging facilities in New Orleans, and ultimately, California coastal markets.

Similarly, for ethanol production that does not have water access, producers will collaborate with railroads, to put together efficient staging areas for the collection of sufficient railcars to make up trainload movements[4] to various California hubs.

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[2] Namely, port congestion, the availability of Jones Act/OPA 90 ships, and sufficient terminal capacity at those locations.

[3] Barge turn-around times, equipment availability, seasonality factors, storage and loading capacity and productivity at liquid terminals on the Upper Mississippi River, and locking delays to name a few. In addition to the actual loading/unloading and river barge transportation, there is also the potential for idealistic assumptions related to the supply chains that will deliver ethanol shipments to the River, i.e., refusal by the railroads to offer competitive rates for the delivery of ethanol to the River thereby forcing a greater quantity of California's total ethanol transportation needs over the railroads' long haul. Similar idealistic assumptions could also be made regarding the extensive trucking operations that would be necessary to move ethanol from production facilities in sufficient quantity to efficiently load barges, including the availability of sufficient highway infrastructure to get trucks in and out of river terminals and the potential adverse community impacts that might arise.

[4] The references to unit-train service that have arisen are real misnomers. By definition, unit train railcar sets are rarely uncoupled (except to change out power or bad order cars). They are loaded on loop tracks while the locomotive power pulls the cars under loading facilities and are

Very few producers would currently appear to have sufficient volume to independently load enough rail cars to fill out an entire train. Even fewer existing terminals in California are capable or receiving an entire train. Accordingly, a complex determination of actual railroad origin and destination points, for each production and consuming market respectively, needs to be cooperatively developed in order to identify needed infrastructure requirements for the disperse collection and distribution of these rail car shipments.

Conclusions

Designers of both railroad supply chains and waterborne supply chains will also make independent assessments of the overall competitiveness of the delivered price and service standards they can offer viz a viz the other alternative. Such analyses will form the basis for the expected magnitude of traffic they will handle and set requirements for the acquisition of necessary transportation assets, labor, and infrastructure at each node (link) in the integrated supply chain as well as permitting the development of detailed operating plans to safely and efficiently execute the movement of product over each link.

The transportation and logistics bottlenecks I have discussed in the examples herein are, by no means, an exhaustive list. Hopefully, they highlight the reality that the development of the ethanol market, and supply chains that are capable of delivering a sufficient, reliable and safe stream of ethanol to California on a future date certain, will require extensive study, coordination, and monitoring to ensure compliance.

Moreover, the certainty of whether or not there will be a California market for ethanol will drive the market's participants to determine an appropriate sequence of their commitments, justify capital expenditure, and identify the necessary lead-time for the development of economically efficient infrastructure. CEC should take the lead in facilitating commercial agreements between market participants that will be necessary to put together these complex alternative supply chains and ensure that the procurement plans of California refiners have a reasonable probability of success.

It is not unreasonable to assume that markets for ethanol will develop at origin production plants, at specific landlocked consolidation points, at loading points on the Upper Mississippi River, staging terminals at New Orleans, receiving terminals on the California coast, and large rail-served storage and blending terminals in and around California. Refiners and terminal operators in California

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unloaded in a similar fashion at destination loops using bottom dump or rotary dump cars. This service is essentially limited to the transportation of grain, coal, and some other dry bulk products. It is extremely important to note that, given the size and dispersion of existing ethanol production plants and the liquid character of the product, trainload quantities of ethanol cars will be loaded at logical production plants and/or trucked to large transloading sites and loaded into rail cars. Subsequently those cars will have to be assembled into trains after switching them to existing (or newly developed) rail yards in the Midwest and similarly distributed from already congested rail yards in California (or located near California enroute to/from ethanol origins).

can then develop procurement plans which might address the magnitude of product that will be bought on long and/or short-term supply contracts versus the spot market, the location of those purchases, and the party responsible for the transportation and logistics from the point of sale.

CEC has a responsibility to understand and facilitate the development of this market in order to protect the public interest of California consumers.

Respectfully submitted,

Thomas A. Schmitz

APPENDIX A - Resume of Thomas A. Schmitz

Summary of Qualifications

A seasoned transportation and logistics professional with a wide range of experience in government, private industry, and consulting applications. Significant skills in all facets of surface transportation and logistics: management, operations, strategic planning, technology deployment and communications, information management, intelligent transportation systems third-party logistics, costing, economic and financial analysis, marketing, negotiations and regulation.

Skills and Accomplishments Inventory

MANAGEMENT AND MARKETING

Managed an entire "start-up" business development for The Boeing Company. The effort was staffed using a multi-disciplinary team of engineers and transportation and logistics professionals to develop a "business case" and start-up business plan for a new business unit. The effort resulted in a new business "launch" in the area of intelligent transportation systems (location-based information) and the securing of a "charter customer".

As the current Director of Marketing and Sales for this business: actively engaged in executing a marketing plan (including establishing the value proposition for prospective customers, "branding" products and services, developing printed sales brochures, and managing press announcements. Also managing market and product development, identifying and securing channels to market, establishing value-added re-seller agreements, and negotiating partnerships, alliances, and joint ventures.

Proposed, marketed, staffed, trained, and managed a Transportation Consulting Practice aimed at Fortune 1000 companies which grew to $4 Million in revenues in 3 years. As an executive (VP and Director) in two separate consulting firms, participated in company management and strategic planning, human resources issues, budgeting, incentive compensation, and investment strategies.

Participated in and managed the start-up, growth and subsequent profitable divestiture, of a rail car management and asset tracking company.

Managed and supervised multi-disciplinary consulting teams engaged in researching markets: size, structure, trends, business cycles, competition and competitive dynamics, pricing, demand/supply and customer profitability differentials.

Managed client-staffed teams to re-engineer business processes. An example engagement resulted in the re-organization of staff responsibilities and a 30% improvement in productivity as measured by jointly negotiated KPI's (key performance indicators), and significantly lower $5+million/yr transportation rates and improved asset management.

Managed multi-disciplinary teams (economists, financial analysts, cost accountants, attorneys) engaged in rate, operations, and merger/acquisition analysis of regulated transportation firms. Responsible for technical recommendations to Chairman (ICC), coordinated with SES and executive colleagues to establish direction and ensure completion of agency goals and mission, developed precedent and policy, drafted and reviewed legislation, and prepared rulemaking decisions. Also responsible for furtherance of EEO, affirmative action, and other human resource goals, compliance with efficiency in government initiatives (ensuring no waste, fraud, or abuse), compliance with FOIA regulations, and the development of Section and Office budgets. Staffed, developed performance objectives, performed periodic employee reviews, trained, prepared individual development plans, established schedules, managed reporting requirements, and supervised public relations/customer service activities of the staff.

OPERATIONS ANALYSIS and STRATEGIC PLANNING

- Managed and participated in comprehensive study of current intercity/regional TL and LTL motor carrier operations and domestic and international intermodal operations (TOFC/COFC yard/ramp operations, "steel-wheel and rubber tire" interchanges at major gateways, drayage components, port facilities, steamship operations, customs clearances, etc.). Research and recommendations assisted The Boeing Company in assessing the business opportunity to launch an intelligent transportation business. The HW technologies and communications associated with the competitive analysis were also comprehensively researched. This effort formed the basis for a business launch to provide carriers, shippers, leasing companies and IMC's value-added location-based information services for asset and cargo management and improved customer service and to assist ports and MPO's in the identification and timing of needed infrastructure improvements.
- Advised large arbitrage firm on the attributes of the operating and business plan associated with Union Pacific Railroad's proposed acquisition of Southern Pacific Railroad; resulting in the firm holding on to their SP stock position and enjoying large gains when the merger was approved.
- Studied the Conrail merger filings, and on-site intermodal operations in and around the Port of New York and New Jersey to assess the commercial and operational implications of proposed operating and business plans on the Port. Participated in strategic planning with Port Authority attorneys resulting in a negotiated agreement for the Port to monitor and become a participating "stakeholder" in the Joint [railroad] Access Area.
- Studied rail and truck operations at the Military Traffic Management Command's Sunny Point, NC ocean export terminal as well as inland CONUS ammunition and explosive GOCO facilities to recommend improved supply chain management (modal selection model) and a railroad rate/service negotiating strategy for munitions exports to European theaters.
- Conducted six month coal transportation operations in Kentucky and West Virginia. Specifically, conducted on-site analysis of rail loading/unloading facilities, barge and truck rates and operations, capacity, cycle time, contract and spot procurement practices and market dynamics to identify alternative transportation options and contract negotiating strategy for a major Mid-Western electric utility.
- Managed and participated in numerous studies of in-plant transportation operations for Fortune 1000 companies, i.e. detailed time and motion studies and metrics development for rail, truck and barge loading/unloading operations, local switching from serving rail yards and truck/barge terminals, available capacity, cycle times, and carrier responsiveness. Recommend improved track layouts, expanded loading or transloading facilities, pre-positioned inventory placements, introduction of private switching services and rail spur construction and formation of short-line railroad.
- Participated in the ICC's motor carrier platform study that identified service units of production, time and motion standards, and assignment of cost accounting rules to the terminal operations of motor carriers (pre-deregulation of trucking in 1980).

QUANTITATIVE ANALYSIS

In numerous consulting engagements (as staff and as management/marketing) performed economic studies of market characteristics that influence elasticity of demand and pricing policies to assess current transportation and supply chain contracts and to develop leverage and strategies for rate/service negotiations with transportation providers, suppliers, or purchasers.

Analyzed the business and market and participated in the "requirements definition" for a complete SCM and e-commerce solution for a large grain cooperative in Queensland, Australia (including coordination with Queensland Rail and the Port of Brisbane.

- Analyzed the impact of a proposed merger of Canadian National Railroad and the Burlington Northern Santa Fe Railroad on the trade and business economics of the Port of Vancouver, BC.
- Performed numerous financial analyses of proposed capital expenditures. Developed financial models that enabled sensitivity analysis of key variables (inflation, revenue growth, cost of goods sold, productivity, capital structure and cost of capital, salvage value, depreciation rates and tax effects). Developed justification for model inputs and ranges of sensitivity and measured NPV of alternatives. Made detailed recommendations to management including timing, capital structure, source of capital, etc. and calculated various financial measures applicable to the recommendation (i.e, ROI, ROE, ROA, ROS, IRR, etc.).
- Participated in, and supervised, on-going refinement of the Surface Transportation's prescribed Uniform Railroad Costing System (a million lines of code costing accounting application that develops service units and unit costs for US railroads as well as individual movement costs for specific shipments and carriers). Participated in, and supervised, the 7 year negotiation of appropriate regression formulas for use in assigning annual expenditures to service units of production.
- Managed the development of the Carload Waybill Sample (a statistical analysis of the railroad traffic in the US) and performed numerous traffic flow analyses using that database as well as numerous other surface transportation traffic flow databases (Army Corp of Engineers, DRI, etc.)
- Participated in the development of accounting standards and a Uniform System of Accounts for rail, truck and barge companies (during the periods those entities were regulated).
- Analyzed for numerous consulting clients: transportation operations, costs and traffic flow and the implication of these factors on safety, the environment, operational efficiency, labor, carrier pricing and rates of return on investment.
- Analyzed economic, cost, financial and operating, and business plan evidence introduced in rate, abandonment, and merger proceedings before the Interstate Commerce Commission. Assessed the quality of opposing parties' evidence and supporting workpapers and recommended agency positions on each litigated issue.

COMMUNICATIONS AND SOFTWARE SKILLS

- Prepared detailed written proposals and Final Reports to numerous Fortune 1000 companies to provide management consulting services.
- Prepared detailed written technical analysis in Interstate Commerce Commission proceedings and delivered oral briefings to executive colleagues, Commissioners and their staffs, Congressional Staff, and GAO.
- Prepared complex technical manuals for the use of government and commercially developed models and software.

Drafted complex rulemaking proceedings and drafted legislation.

Prepared expert written testimony, and gave oral testimony on direct and cross-examination in civil and administrative litigation proceedings.

Gave oral depositions in civil litigation.

Prepared marketing brochures and qualifications packages to advertise consulting services.

Wrote detailed business plans for The Boeing Company, and Fieldston Consulting.

Organized, prepared, marketed and presented (and updated annually) a three day for-profit seminar which I delivered to transportation and logistics executives in Colorado Springs and Orlando for 6 consecutive years.

Proficient in: Excel, Lotus, WordPerfect, MS Word, PowerPoint, Milestone Scheduling software, Mapping software, Lotus Notes, MS Exchange, Internet Explorer and Netscape for research.

General understanding (what they do and how they are to be used) of ERP systems and various SCM packages.

Participated in development of systems architecture for several e-commerce and SCM solutions solicited by clients and business venture start-ups.

Professional History

August 2001 - Present	President, TAS Consulting
January 2001 – August 2001	Director, Marketing and Sales, Integrated Information Services – The Boeing Company
May 1999 – Dec 2000	Director, Business Planning and Development – Transportation and Logistics, The Boeing Company
Oct 1998 - May 1999	Vice President, PHB Hagler Bailly Consulting 1776 Eye St, NW Washington, DC
1995 - 1998	Director, The Fieldston Company 1800 Mass Ave., NW Washington, DC
1988 - 1995	Interstate Commerce Commission, Chief, Section of Economic Policy and Analysis — Office of Economics
1983 -1988	A. T. Kearney Management Consultants, Senior Associate and Project Manager
1974 - 1983	Interstate Commerce Commission, Chief, Cost/Financial Analysis Branch

Testimony

Verified Statement (on behalf of four large shippers), Surface Transportation Board, Market Dominance Determinations – Product and Geographic Competition. Ex Parte No. 626. May 1998.
Verified Statement (on behalf of the Port of New York and New Jersey), Surface Transportation Board, F.D. 33388, CSX Corporation and CSX Transportation, Inc., Norfolk Southern Corporation and Norfolk Southern Railway Company. October 1997
Verified Statement and Expert Testimony (on behalf of United States Pollution Control, Inc. and USPCI), Khosrow B. Semnani v. United States Pollution Control, Inc., Civil No. 2:95 CV 638C in the United States Court, District of Utah, Central Division. April 1999

Presentations

Railroad Logistics and Negotiating Strategies Seminar Presentation, Colorado Springs July 1999 (and prior 5 years)

Business Opportunities and Threats for the Tank Truck Industry Arising from Rail Industry Consolidation. Presentation to National Tank Truck Conference — Executive Forum. Chicago, Ill. November 1998.

Railroad Business Plan and the Public Interest Debate Presentation to Pacific Northwest Shippers Association, September 1998 and to Western Coal Transportation Association, September 1998.

Regulatory and Legislative Threats to the Rail Industry Presentation to Schroders & Company, New York City, June 1998.

Developing Opportunities and Strategies in a Post-Merger Environment — A Workshop for Gulf Coast Shippers Presentation to the Transportation Club of Houston, October 1996

Professional Organizations/Awards

Member: Council of Logistics Management
Award: ICC Chairman's Award for Exceptional Achievement – May 1991
Award: ICC Certificate for Outstanding Commitment and Significant Contributions – 1992

Education

Thomas Jefferson H.S., Annandale, VA -- 1970
George Mason University, Fairfax, VA — Bachelor of Science, Business Administration, Accounting Major, 1973
Advanced Regulatory Studies Program, National Association of Regulatory Utility Commissioners – 1992

Pat Pèrez - Comments on Possible Impacts

From: "Piel, William J" <William.Piel@Lyondell.com>
To: <pperez@energy.state.ca.us>
Date: 3/1/02 8:19 AM
Subject: Comments on Possible Impacts
CC: <gschremp@energy.state.ca.us>

Pat Perez

Attached is a Word doc containing comments from TEIR Associates on the "Possible Impacts of the MTBE Phase Out on Gasoline Supplies". Please call me at (610) 359-5728 or email me if you have any questions.

Bill Piel
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<<TEIR Comments on Impacts of MTBE Ban.doc>>

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February 28, 2002

Patrick Perez
California Energy Commission
1515 Ninth Street, MS 23
Sacramento, CA 95814

Re: Possible Impacts of MTBE Phase Out on Gasoline Supplies

Dear Mr Perez,

After reviewing the report given by Stillwater Associates, Inc. at the Feb 19 Workshop, TEIR Associates is providing a number of comments on the referenced subject which are attached. However, a number of the main concerns have been summarized in the following paragraphs.

Stillwater Associates made an excellent case that California will experience a "prolonged" gasoline supply shortage that will last more than a year if MTBE use is banned. Since this is not a temporary imbalance or short term supply event, a sustained market price increase of 50 cents per gallon (estimated by the Stillwater analysis) is required to reduce California's 15 Billion gallon annual demand by 5% to correct the imbalance. This price increase raises the cost to California consumers by about $7 billion more per year. However, if the demand has to be reduced to 13.5 billion gallons per year to match a 10% shortfall in supply, the required $1.00 per gallon increase will cost the consumers about $13.5 billion more per year until new supply capacity can eventually be established. These financial impacts are much greater than those stated in Stillwater's economics slide of their presentation, and will have about the same financial impact for California as last year's electrical power supply crisis.

The refiners have publicly countered that they are making the necessary process modifications to meet the new RFG3 specifications without the use of MTBE such as adding distillation capacity to remove front-end pentanes and the back-end heavy tails. However, both these modifications only serve to reduce gasoline supply capability at the in-state refineries, and no refinery modifications have been announced that will actually expand gasoline capability to replace the lost MTBE volume. Also not well clarified in the report is that these prolonged shortages are almost exclusively due to banning MTBE, and that lifting the federal oxygen standard will not likely alleviate the chronic shortage.

Given that the water supply crisis predicted by University of California 1998 Study on this issue has not occurred, it would seem that the need to remove MTBE from California has not materialized. As a further confirmation, James Giannopoulos stated recently that a study by his department showed that only 6 water supply wells in all of California were actually taken off line due to MTBE MCL exceedences (not the 10,000 number quoted in the media). The contamination for these 6 wells resulted from LUST that occurred in the mid-1990's when the UST leak prevention program was only about 50% implemented.

In summary, the "predicted" threat to water supplies seems to have been mitigated with California's UST leak prevention program. However, as suggested by the Stillwater analysis, California will incur a very "real" gasoline shortage and price increase that will cost consumers and the California economy many billion of dollars to the benefit of the another energy industry. Therefore, it seems warranted to slightly modify a recent quote by Governor Davis regarding ethanol on this subject. "There is no reason scientifically or economically that California should have to remove the 10% MTBE by volume in every gallon of gasoline sold in California."

TEIR Associates appreciates the opportunity to comment on this matter. As always, I am available to answer any follow-up questions that you may have. As someone who has for many years been working for good transportation fuel policy, it would be very disappointing to see California residences experience another unnecessary energy crisis that will be attributed to government regulations of the marketplace.

Sincerely,

William J. Piel

Business Director

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Comments to the California Energy Commission
Possible Impacts of MTBE Phase Out on Gasoline Supplies
Workshop Presentations February 19, 2002

By
William J. Piel
TEIR Associates, Inc.

C7 Alkylate supplies do not exit today (or next three years) -

Based on the chemical propylene supply balances from the CMAI report used by Stillwater Associates, over 90% of the refinery propylene production goes to high value petrochemical sales. The remaining refinery propylene is used to produce about 30 M BPD of residual C7 alkylate which is only about 3.5% of the total alkylate produced in the US. Since this residual C7 alkylate is co-produced and dispersed with all the C8 alkylate production, it would be economically impractical to put small and costly separation operations to recover this residual C7 alkylate at all 200+ FCC process units in the US. Therefore, to develop a reliable 75 M BPD of C7 alkylate supply for transfer to California, it would require about 30 US refiners to divert all their refinery propylene production away from high value petrochemical sales to C7 alkylate production. These refiners would also have to install a C7 alkylate separation unit, new segregated storage and rail loading facilities to ship the C7 alkylate to the West Coast. Rail shipping would likely be required since it is not economically practical to stockpile a 2 M BPD production for 100+ M BBLs of ocean going shipments for the West Coast.

Needless to say, diverting this amount of refinery propylene away from the their existing high-value petrochemical supply contracts would take years, particularly when building the C7 infrastructure requirements are considered.

MSAT does not allow substitution of gasoline imports for clean components in US gasoline pool -

The Stillwater Report proposed that one potential market supply source of clean components might be to recover them from Gulf Coast gasoline production by replacing it with like-volumes of gasoline imports into the NY market. This volume substitution or balancing in the gasoline market may have been allowed in prior years. However, effective January 1 this year, EPA implemented the MSAT (Mobile Source Air Toxics) regulation which requires that the whole gasoline market maintain at least the minimum amount of toxic cleanliness that is equal to prior reference year. Therefore, higher toxic gasoline imports can no longer be substituted for the removal of low toxic gasoline components from the gasoline production in the Gulf Coast.

No Alkylate Production from converted Merchant MTBE Units per US EPA's PACE Study –

EPA contracted PACE to study the economic incentive to convert MTBE units to alkylate or isooctane products if MTBE should be banned. Based on the recent historical market values (1994 to 2000), PACE concluded that such process units could not even cover their operating cash cost let alone any required new capital recovery with market values. Since PACE's analysis shows that large price premiums over market value would be required for them to convert and operate, they concluded that conversion would only occur if long term supply contracts with large premium above market could be secured. PACE felt that these types of contracts were not achievable in these markets of regulatory uncertainty , and therefore stated that *"given the premiums versus their product blending values that most converters would need, it appears entirely unlikely that many merchant-market buyers would be willing to participate on this basis."*

Source: "Economic Analysis of U.S. MTBE Production Under an MTBE Ban", Draft Report for US EPA, PACE Consultants, May 2001, Docket No. A-2001-20-11-A-1

TPC

TEXAS PETROCHEMICALS LP

March 1, 2002

California Energy Commission
Attention: Pat Perez
1516 Ninth Street, MS 23
Sacramento, CA 95814

Re: Possible Impact of MTBE Phase Out on Gasoline Supplies - CEC Workshop February 19, 2002

Dear Mr. Perez,

Texas Petrochemicals LP ("TPC") thanks you for the opportunity to provide written comments relative to the CEC Workshop of February 19, 2002, on the subject of Possible Impact of MTBE Phase Out on Gasoline Supplies. TPC is an employee owned company with 320 employees. The core business of the company includes the dehydrogenation of isobutane for the merchant production of MTBE. The company has a major commitment to supply components for clean burning gasoline to comply with the Clean Air requirements of the nation. This commitment includes a reliable supply of products in a cost efficient manner. It is with this background that we submit comments relative to the workshop in an effort to be supportive and helpful to California.

We thank you for an in-depth presentation of the information as generated by the Stillwater Associates report and the work of the Commission. We found the basis of the study to be sound and the work was focused on specific areas of concern. These comments will be in response to the formal Stillwater Report and, secondly, in response to some comments provided during the discussion period.

We support the conclusion and recommendation presented that California extend the ban date for MTBE three years. This would provide time to accomplish several suggested infrastructure improvements and to determine if extensive programs that have been put in place will provide adequate protection to State resources that may lead to the conclusion that MTBE does not pose an unwanted risk to the environment. The time suggested is not excessive nor has there been any demonstrations of immediate harm. The decision to extend the time would not imperil any safety nor health issues.

A specific issue that was addressed was

CONVERSION OF MERCHANT MTBE PLANT TO ISOOCTANE FOR ISOBUTYLENE ALKYLATE.

There is no economic justification in today's economic profile to convert existing merchant MTBE plants to isooctane nor isobutylene alkylate production. The current cost of raw materials and energy to convert the butane to a product is greater than the blending value of the product. This does not consider the capital cost required to convert the units to alternative operations. Because there is no economic incentive there can be no plans committed to do such a major conversion. To provide material would require significant capital investment in the current process equipment.

The concept of engineering and making major modifications to existing facilities to convert from MTBE production to isooctane would require significant commercial incentive. This would require customers willing to commit to long-term contracts with a rateable volume at a price to return income on the investment and operating cost. These commercial opportunities have not been demonstrated. Therefore, there are no on-going plans nor commitments to make such conversions and to provide the alternative product.

If the economics were to change and the marketplace justified production of products such as isooctane there would be a significant time required to provide unit conversion. It would be necessary to do process design, detailed engineering, obtain construction permits and provide construction activities to provide the conversion. This time frame could require 36 months to achieve. Thus it becomes apparent that there are no short term provisions available to supply high quality octane components for California. The optimum blending component remains MTBE.

In conjunction with and similar to the issue of conversion cost it is worthwhile to note:

STRANDED COSTS

There was significant discussion at the workshop about the ethanol industry investing capital to produce ethanol for California. This conversation referenced Stranded Cost for these facilities. We wish to introduce the issues that merchant MTBE producers invested major capital in plants to provide MTBE to meet the need for clean burning gasoline for compliance with clean air regulations. These capital investments are in hundreds of millions of dollars and were invested in good faith to meet the specified needs. At the current time the approach is to eliminate the use of this product which is dedicated to a service. There now appears some concern of these units having no reason to operate or a proposal to convert the units to a new product that is not commercially viable. There is little question that long term a mandated subsidized product such as ethanol will have a market at least if they make the product economical. So the argument for Stranded Cost is really a strong picture for review of the MTBE producers and the fact that there is an ongoing program designed to put our company out of business and leave us with Stranded Costs. We certainly recommend that this be considered at the same time you think of new construction for ethanol. These points should also be considered seriously as

thoughts are given to converting merchant MTBE plants to alternative products such as isooctane and think of the requirements for new capital investments as the conversation continues on the lines of banning a product and shutting the production facility with no recourse on the invested capital. Perhaps the ethanol producers would be more reluctant to invest their capital if they did not have a mandate nor a subsidy. We should remember that the MTBE producers invested their money without a mandate and have never had a subsidy.

There was some consideration given that

ETHANOL REDUCES CRUDE OIL IMPORTS

There is a mistake that ethanol is a direct replacement for hydrocarbon gasoline and therefore reduces the need to import crude oil. The underlying statement by Stillwater Associates is the lack of production capability of the refiners to provide enough hydrocarbon gasoline components to meet the demands for California usage. The refineries are operating at 92-95% capacity and there will be no new plants built in the near term. The removal of MTBE from gasoline would remove 8-10% of the total pool and in the RFG areas that would be 11% of the volume. The use of ethanol does not contribute a net volume gain because it is necessary to remove components from the gasoline pool in order to blend the ethanol. This requires light end removal for RVP and heavy end removal to meet T50. Thus, if the desire is to produce a total volume to meet demand it becomes necessary to either process more crude oil in the refineries or import more components from outside. With the refineries at capacity it becomes necessary that imports would provide the shortfall. In either case, it becomes apparent that the state will be dependent upon other sources if the supplies are to be available.

There were some comments expressed during the discussion period

WATER CONTAMINATION/EXPOSURE/REMEDIATION COSTS

There have been many studies generated in recent years evaluating the contamination of drinking water sources and systems from gasoline that has leaked from underground storage tanks as well as spills and water craft. The issue that MTBE as a component of gasoline contaminates drinking water is more properly covered through technical evaluation of the detection levels of gasoline components in water systems. Consistently the reports that have been generated by the state health department for drinking water as well as technical journals that review these studies indicate that the detection of MTBE in drinking water supplies has not increased since completion of the underground storage tank upgrades. The outstanding feature associated with drinking water is the application by California of a maximum contaminate level "MCL" for drinking water. It is through the application of these standards, currently 13 parts per billion of MTBE in drinking water, that provide guidance for both quality and remediation requirements when appropriate. It is interesting to note that federal EPA has issued guidelines for MTBE in water to be less than 40 parts per billion. These MCL's are predicated on odor and taste features which make drinking water less palatable. These are not health exposure guides and should not be interpreted as measurements of risk. Actually, neat MTBE is used for

direct injection into people to desolve gallstones. This procedure has been effective for several years and there has been no reported case of lasting ill effects.

The remediation programs for MTBE are very comparable to those existing and proven techniques for remediation of other gasoline components as well as other general chemicals. The cost for remediation are fundamentally equivalent and there is no indication that MTBE requires a significantly more severe process nor more costly operation than other generic chemicals. The primary control that should be targeted is the prevention of leaks of gasoline into the environment. There was a ten (10) year program to upgrade and correct deficient underground storage tank systems and there is a continuing effort to implement a more stringent program. It should be recognized that gasoline does not belong in drinking water. It does not matter what composition the gasoline is, this material should remain in the fuel tanks and not be released into the environment, particularly water. If gasoline is contained properly there is no problem with MTBE. If MTBE is detected in water there are other more dangerous chemicals in that same water. Thus, there should be a comprehensive program to provide clean reliable, drinking water rather than a focus made on MTBE.

In summary, TPC supports the recommendation of the Stillwater Associates report that California extend the proposed ban date of MTBE for three years. During this time the state can provide infrastructure and support systems for receiving, storing and distributing hydrocarbon components for gasoline. This would also provide time to determine that adequate infrastructure exists for receiving and distributing ethanol. There should be a major concern that such a change from a known, highly effective clean air program as the current California RFG program is, could result in reduced supplies of gasoline, resulting in exceptionally high costs to the consumer and generating an increase in air emissions because MTBE is removed from the gasoline pool. TPC remains committed to supporting our customers the refiners and our custodians, the state environmental protector, in providing high quality clean burning components at an economical price. We commend you on the quality of the study and the comprehensive manner in which you conducted the workshop. We thank you for your patience and your consideration of these comments.

Sincerely yours,

Larry Q. Goodwin
Director, Technology & Asset Evaluation

LQG-02-001:sdh CEC

WESTERN MILLING, LLC
QUALITY FEEDS

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February 22, 2002

Pat Perez, Manager
Transportation Fuel Supply & Demand Office
California Energy Commission
Transportation Energy Division
1516 Ninth Street, MS-29
Sacramento, CA 95814

Dear Mr. Perez:

Western Milling is a feed manufacturer, located in Goshen California, a business incentive zone. We have built this operation over the past few years and now have over 100 employees in the county. Western Milling is actively pursuing co-locating an ethanol facility with our current grain handling business in Goshen. This would bring additional value to the area by adding another 50 jobs not including the multiplier of the ancillary businesses that would provide service. We have been following the MTBE issue for some time and with the Governor's Executive order began analyzing the potential for building an ethanol facility.

We are very eager to pursue this opportunity to add economic development to our region, diversify our business and help provide Californians with a renewable fuel. California Agriculture can provide significant amount of ethanol to the fuel supply, as past CEC studies have indicated. Please allow us the chance. Specifically, an ethanol facility would provide an attractive market for local grain farmers and a valuable feed by-product for the dairy sector that are currently satisfied by mid-west suppliers.

It is essential that the MTBE Phase out deadline is NOT moved. Doing so will effectively eliminate the opportunity to build ethanol plants in California because of the total market uncertainty that will prevail.

Ethanol production in California makes tremendous sense and will create jobs and opportunities. We need certainty, a market, and proper incentives. Delaying the MTBE phase out will send the absolute wrong signal. Please hold firm with your deadline.

Sincerely,

Kevin Kruse
President

Cc:

Susan Kennedy
Governor's office
Via Fax – 916-445-4633

Secretary Winston Hickox
California Environmental Protection Agency
1001 I Street
Sacramento, CA 95814
Via Fax - 916-324-0908

Secretary William J. Lyons, Jr.
California Department of Food and Agriculture
1220 N. Street, Ste 409
Sacramento, CA 95814
Via Fax - 916-654-0403

Executive VP Richard Matteis
California Grain & Feed Association
1521 I Street
Sacramento, CA 95814
Via Fax – 916-446-1063

Western States Petroleum Association
Credible Solutions ❋ Responsive Service ❋ Since 1907

Douglas F. Henderson
President

Via e-mail to pperez@energy.state .ca.us

March 1, 2002

California Energy Commission
Attn.: Pat Perez
1516 Ninth St., MS 23
Sacramento CA 95814

RE: "**Possible Impacts of MTBE Phase out on Gasoline Supplies" Workshop**

Dear Mr. Perez:

On behalf of the Western States Petroleum Association (WSPA), I am writing in response to the CEC's February 19 Public Workshop on potential impacts of the MTBE phase out on gasoline supplies in the state. We appreciate the important role your agency is playing with respect to monitoring the transition to MTBE-free gasoline in the state.

Many of the questions posed in the Committee workshop notice cannot be addressed by WSPA, as these must be responded to by our companies individually. In this letter WSPA has provided a review of some of our principles relative to the MTBE phase out, and has also provided initial comment on several items we believe your consultants excluded from their analysis. WSPA is also reviewing the Stillwater contractor presentation in detail, and will be able to provide additional comments on the study's assumptions and analysis in the near future.

WSPA continues to believe strongly that relief on the federal oxygenate mandate will provide much needed flexibility to our industry. It is critical that the state's agencies provide consistent and renewed support to the governor on the oxygenate waiver lawsuit currently before the courts. As you know, WSPA has intervened in the lawsuit and we believe an expedient resolution to the suit in our favor will help offset some of the consultants' predicted scenarios. Continued pressure on the federal government to institute a national oxygenate waiver may be more productive than a waiver for California alone.

While the Association has no position with regard to a proposed delay in the phase out deadline, we continue to state that our industry will comply with the law regardless of the date. Consistent with our communication with Governor Davis on November 7, however, if there is an extension to the phase out date we would like to recommend it be set at the end of December rather than the November date recommended by the consultants. A general comment on recent

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events is that our industry and others, needs to have regulatory certainty, particularly where significant changes to our operations are required. Continual changes in government directives leads to investment uncertainties, which in turn can lead to project delays and market dislocation.

The consultant's presentation also contained two aspects we previously commented on with the administration but they bear repeating. The first involves a conclusion by the consultants that southern California is the most impacted. WSPA encourages the CEC to view the MTBE phase out implementation program from a state wide, rather than a regional, perspective. WSPA does not support a regional implementation of the phase out, or alternatively a partial or phased implementation. CEC previously noted that neither of these scenarios were feasible and posed significant risks of supply disruptions. Similarly, there was mention at the workshop that the consultant's predicted problems were largely seasonal in nature, and perhaps a solution would be to treat summer and winter fuel differently – WSPA disagrees with this concept.

WSPA continues to share the state's goal of ensuring a smooth transition to MTBE-free gasoline. During the February 19 workshop, conflicting testimony was provided about the extent of MTBE contamination in the state. WSPA recommends your agency, along with other appropriate state agencies, study these varying pronouncements and update the data on MTBE contamination in the state.

Comments were also proffered at the workshop relative to the possibility that additional gasoline volume would be available if ethanol were to be blended at 10% by volume instead of the projected 5.7% (2% oxygen by weight). The Predictive Model (PM), however, severely penalizes oxygen contents above 2%. It has been suggested that incorporation of additional data developed by AAM since the last revision of the PM would flatten the problematic response, thereby making it easier to blend ethanol. In reality, the impact of the AAM data on the PM can be expected to be small, and AAM has itself stated that it is not clear that model changes are warranted based on this data. We would be happy to provide more details of our analysis if you wish, however we want to ensure you are clear on WSPA's opposition to this concept.

In terms of gaps in the analysis, the consultant's study and report fail to identify and evaluate the impacts of major federal, and some state, actions on gasoline supply in California. The study should determine the impacts of these actions on 1) California refinery production and, 2) the projected supply and price of imported CARBOB and blendstocks from non-California sources. The consultant should evaluate how these federal and state actions impact gasoline supply both in the short-term (if the MTBE phase out deadline of 12/31/02 is retained) and in the longer-term (in the timeframe of the consultant's recommended delay to 11/2005). The major federal actions referred to are:

a) Potential federal legislation (eg. Daschle S. 1766) that could, if passed:
   -eliminate MTBE nationwide within 4 years (by 2006)
   -eliminate the minimum oxygen requirement in EPA RFG (either uniformly or at State/Governor's request)
   -add a national renewables requirement of 2.0 billion gallons starting in 2003 that escalates annually to 5.0 billion gallons by 2012
   -provide greater flexibility for RFG opt-in
b) Various existing MTBE bans in other states (eg. New York ban effective 1/1/2004)
c) EPA's adopted Tier 2 gasoline sulfur regulation
d) EPA's highway (on-road) diesel sulfur regulation
e) EPA's Mobile Source Air Toxics regulations that establish refinery-specific limits on RFG and conventional gasoline toxicity.

Another area the consultants appear to have missed is the impact of the scenarios on third party terminals and independent marketers. It was difficult from the workshop to ascertain what assumptions the consultants had made in several instances, so clearer explanations of these assumptions would be helpful.

Overall, WSPA would agree with some of the statements made at the workshop relative to the fact that California's gasoline regulations have created an "island" effect which makes the California refiners products less fungible. We would also agree with the consultant that there exist several barriers to additional gasoline supply, for example: Title V operating permits, union contracts, environmental justice requirements, subsidization of alternative fuels, SCAQMD's rule 1178, actions by the ports to restrict bulk product movements, and others. WSPA will be providing a more complete analysis of the barriers our industry faces in the near future.

In closing, I would like to emphasize the need for a decision soon on the MTBE phase out deadline since our companies only have 9 months under the current Executive Order. As always, a high level of certainty is essential for the marketplace to continue to function smoothly. WSPA and its' companies look forward to working with CEC to ensure a smooth transition to MTBE-free gasoline. If you have any questions, please feel free to contact me any time.

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WHITE ENVIRONMENTAL ASSOCIATES
ENVIRONMENTAL GOVERNMENT RELATIONS

JAMES S. WHITE
PRINCIPAL

428 EAST STONE CANYON WAY
BREA, CALIFORNIA 92821-2648
weajsw@aol.com

February 27, 2002

California Energy Commission
Attention: Pat Perez
1516 Ninth Street, MS 23
Sacramento, CA 95814

Dear Mr. Perez:

White Environmental Associates is pleased to have the opportunity to submit comments on the "MTBE Phase Out in California," by Stillwater Associates. I am the principal of White Environmental Associates and have over 30 years of experience in the downstream sector of the oil industry. During that time, I developed an expertise in matters regarding underground and above ground storage systems as well as oxygenated and reformulated gasoline. While employed by Atlantic Richfield Company (ARCO), I had management responsibility for the methanol fuel (M85) program and was a member of the ARCO concept team that brought about the first commercially available reformulated gasoline, EC-1.

My primary concern regarding the Stillwater Report is the matter of whether the completion of the Longhorn Pipeline and possible Kinder Morgan expansion would eventually supply Arizona gasoline requirements. As this concern is fairly well recognized and to be addressed by others, I wish to request that the California Energy Commission (CEC) consider the attached comments that appeal to the CEC's mission and vision relative to the pending continued phase out of MTBE in California's gasoline. (1)

The main thrust of my comments is aimed at the outdated basis for Governor Davis' decision, the 1998 University of California "Health and Environmental Assessment of MTBE." This Study is in dire need of reevaluation in the interest of assuring that we are not continuing down a path that was decided based on inaccurate information. Key to this Study were predictions of major impacts on California groundwater resources that have not materialized.

Putting the perceived MTBE threat to groundwater into perspective, James Giannopoulos, Assistant Division Chief at the State Water Resources Control Board (SWRCB), recently presented the results of a review conducted by his

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office. This review researched the cause of over 4,000 public supply wells closing out of a total of 16,000 such wells. Mr. Giannopoulos found that just 6 wells in California have been closed due to exceedances of the state's maximum contaminate level (MCL) for MTBE. The vast majority of closed public supply wells have been closed due to detections and exceedances of MCLs for solvents and nitrates. 2

In addition to this revelation, the public water supply MTBE detection records maintained by the California Department of Health Services show a declining rather than increasing incidence of detection and at very low levels. The SWRCB leaking tank statistics show a decline in the rate of tank system failures and the claims against the leaking tank clean up fund are also on a decline. All of this is contrary to the dire predictions of the University Study.

There are also the many improvements that have been and continue to be made to the California underground tank program. Many have not recognized that the few incidents of larger contaminations occurred prior to the 1998 deadline for tank upgrades. That deadline has past and the upgraded tanks are being subjected to even greater protective measures and procedures.

I request, in the interest of California's citizens and economy, that the CEC recommend the 1998 University of California "Health and Environmental Assessment of MTBE" be reevaluated relative to the data behind it's conclusions and recommendations. It is time to take a look at this study in the light of actual real world data. 3

Sincerely

James S. White

James S. White
Principal, White Environmental Associates

Enclosure: White Environmental Associates Comments

WEA/jsw CEC0227ltr.doc

WHITE ENVIRONMENTAL ASSOCIATES
Comments on the Report:
"MTBE Phase Out in California"
by Stillwater Associates
Presented at the February 19, 2002
CEC Fuels and Transportation Commission Workshop

The basis of these comments is the potential for substantially higher costs to consumers and the California economy of billions of dollars per year. This potential has been forecasted under several different scenarios by the California Energy Commission (CEC) since 1999 and while the assumptions and real world data have changed over that period of time, the predictions continue to warn of pending gasoline supply problems and significantly increased costs. The Stillwater Associates report has added another dimension and further substantiation that with the phase out of MTBE comes many uncertainties along with certain increased costs for California's gasoline.

It is the CEC's mission and vision to, among other things, improve energy systems that promote a strong state economy while assuring affordable, reliable, diverse, safe and environmentally safe energy choices. Consistent with this excellent goal, the CEC should suggest that the time has come to take another look at the premise on which the Governor made his decision to phase out MTBE three years ago.

The premise under which California continues the march toward the elimination of MTBE from gasoline was a short-term, 1998 study conducted by the University of California system. The study had some conclusions and recommendations that were compiled during its short-term duration lacking much real world data. Although the California underground storage tank (UST) regulatory program was also evaluated in a separate effort, the results of this tank study were not considered as a part of the Governor's decision to phase out MTBE.

I have summarized several good reasons for the CEC to recommendation a reevaluation of the 1998 University of California "Health and Environmental Assessment of MTBE."

UC Study Review
Last year there were three independent reviews of the University of California MTBE Study. Each one of these reviews resulted in papers that all happened to be released during August. One paper by Dr. Gordon Rausser of University of California, Berkeley and Charles River Associates looked at the social costs of an MTBE ban in California. This report considered the full spectrum of costs ranging from gasoline costs, air quality, and water quality. The Charles River paper concluded that increased "social costs" in the range of $1 billion per year. [See reference 1.]

Malcolm Pirnie took a look specifically at the real world water quality impacts and the associated costs impacts from continued use of MTBE in California's gasoline since the release of the University of California MTBE Study at the end of 1998. They concluded

that the long-term predictions made in the University Study are very likely to be much less severe than predicted. The Malcolm Pirnie assessment noted that the records maintained by the California Department of Health Services demonstrate a decline in detections of MTBE in groundwater from public supply wells and surface water. [See reference 2.]

White Environmental Associates (submitter of these comments) also performed an evaluation of the University of California MTBE Study and independently looked at several areas common to the Charles River and Malcolm Pirnie reviews. White Environmental drew a comparison of the many University Study's conclusions and recommendation versus real world data since 1998. All of the of the real world comparisons come from reliable sources and most came from statistics and data generated and maintained by the CEC, the California Air Resources Board, the State Water Resources Control Board and the Department of Health Services. White Environmental concluded that there is a dire need to reevaluate the basis of the Governor's decision to phase out MTBE. [See reference 3.]

Drinking Water Detections Down

White Environmental Associates has been tracking the California public water system MTBE data placed on the Department of Health Services webpage since 1997. There is an unmistakable decline in detections since 1998 as confirmed by the aforementioned Malcolm Pirnie report. Exponent took this evaluation a step further and performed an evaluation of frequency and concentrations of MTBE detections in drinking water sources relative to risks to the public via drinking water. The Exponent conclusion was that MTBE is "unlikely to pose a significant health risk." [See references 4 and 5]

UST Improvements

At the same time the University of California MTBE Study was underway, Governor Wilson ordered an evaluation of the California underground storage tank (UST) regulatory program. This tank program evaluation was conducted by a UST Advisory Panel of experts from agencies and industry. The reports from this effort resulted in SB 989 that not only dealt with matters regarding MTBE specifically but was primarily aimed at improving the California tank program.

White Environmental Associates researched the State Water Resources Control Board leaking UST statistics and found that with the passage of the federal and state UST upgrade requirements, the number of new leaking UST cases were significantly declining and the number of claims against the states leaking tank clean up fund were also declining. This is consistent with the decline in detections of MTBE in public supply wells and the much lower detection levels.

The implementation of the additional UST system controls and program enhancements mandated under SB 989, will bring about even greater improvements in the reduction of

undetected tank failures and improved tank program enforcement. A few of the tank program improvements include:

- Agency sanctioned inspection frequency from once every three years to every year.
- Underground tank systems with single-walled components near drinking water wells are required to exercise enhanced leak detection.
- Under dispenser containment.
- Training for tank system owners and operators to assure they know how the leak detection systems work and what to do if they trigger an alarm.
- Testing of secondary containment systems.
- Annual testing of leak detection sensors and alarms.
- Significant new penalties for tampering with leak detector sensors and alarms.

The list of regulatory enhancements goes on. [See reference 6]

Compare UC Study with Real World Data

The 1998 University of California MTBE Study, commissioned by SB 521, was performed under a very short timetable (about 6 months) and with limited and strictly allocated funding ($500,000). If California is to go through with the phase out of MTBE in gasoline, the state owes it to the California motoring public to take another look at the results of this Study, the basis for the decision to phase out MTBE. The stakes for California and its citizenry of going forward with the phase out are very high and may be reduced but not entirely eliminated through a delay.

The California Energy Resources Conservation and Development Commission (better known as the California Energy Commission or CEC) should recommend that the California Environmental Policy Council, under the chairmanship of the Secretary of the California Environmental Protection Agency, undertake a public and open reevaluation of the 1998 University of California "Health and Environmental Assessment of MTBE" under the light of real world information and data.

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From: <WEAJSW@aol.com>
To: <pperez@state.ca.us>
Date: Thu, Feb 28, 2002 5:34 PM
Subject: Corrected WEA Comments

Pat,

Per our conversation in San Diego, I have added the references that I inadvertently left off my original submission. I have also added a paragraph. Please replace my 02/27/02 comments with the attached. The cover letter may stand as is. Thank you.

Best Regards,

Jim White
White Environmental Associates
February 28, 2002

WHITE ENVIRONMENTAL ASSOCIATES
Comments on the Report:
"MTBE Phase Out in California"
by Stillwater Associates
Presented at the February 19, 2002
CEC Fuels and Transportation Commission Workshop

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It is the CEC's mission and vision to, among other things, improve energy systems that promote a strong state economy while assuring affordable, reliable, diverse, safe and environmentally safe energy choices. Consistent with this excellent goal, the CEC should suggest that the time has come to take another look at the premise on which the Governor made his decision to phase out MTBE three years ago.

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White Environmental Associates has been tracking the California public water system MTBE data placed on the Department of Health Services webpage since 1997. There is an unmistakable decline in detections since 1998 as confirmed by the aforementioned Malcolm Pirnie report. Exponent took this evaluation a step further and performed an evaluation of frequency and concentrations of MTBE detections in drinking water sources relative to risks to the public via drinking water. The Exponent conclusion was that MTBE is "unlikely to pose a significant health risk." [See references 4 and 5]

UST Improvements

At the same time the University of California MTBE Study was underway, Governor Wilson ordered an evaluation of the California underground storage tank (UST) regulatory program. This tank program evaluation was conducted by a UST Advisory Panel of experts from agencies and industry. The reports from this effort resulted in SB 989 that not only dealt with matters regarding MTBE specifically but was primarily aimed at improving the California tank program.

White Environmental Associates researched the State Water Resources Control Board leaking UST statistics and found that with the passage of the federal and state UST upgrade requirements, the number of new leaking UST cases were significantly declining and the number of claims against the states leaking tank clean up fund were also declining. This is consistent with the decline in detections of MTBE in public supply wells and the much lower detection levels.

The implementation of the additional UST system controls and program enhancements mandated under SB 989, will bring about even greater improvements in the reduction of undetected tank failures and improved tank program enforcement. A few of the tank program improvements include:

- Agency sanctioned inspection frequency from once every three years to every year.
- Underground tank systems with single-walled components near drinking water wells are required to exercise enhanced leak detection.
- Under dispenser containment.
- Training for tank system owners and operators to assure they know how the leak detection systems work and what to do if they trigger an alarm.
- Testing of secondary containment systems.
- Annual testing of leak detection sensors and alarms.
- Significant new penalties for tampering with leak detector sensors and alarms.

The list of regulatory enhancements goes on. [See reference 6]

Compare UC Study with Real World Data

The 1998 University of California MTBE Study, commissioned by SB 521, was performed under a very short timetable (about 6 months) and with limited and strictly allocated funding ($500,000). If California is to go through with the phase out of MTBE in gasoline, the state owes it to the California motoring public to take another look at the results of this Study, the basis for the decision to phase out MTBE. The stakes for California and its citizenry of going forward with the phase out are very high and may be reduced but not entirely eliminated through a delay.

Putting the perceived MTBE threat to groundwater into perspective, James Giannopoulos, Assistant Division Chief at the State Water Resources Control Board (SWRCB), recently presented the results of a

review conducted by his office. This review researched the cause of over 4,000 public supply wells closing out of a total of 16,000 such wells. Mr. Giannopoulos found that just 6 wells in California have been closed due to exceedances of the state's maximum contaminate level (MCL) for MTBE. The vast majority of closed public supply wells have been closed due to detections and exceedances of MCLs for solvents and nitrates.

The California Energy Resources Conservation and Development Commission (better known as the California Energy Commission or CEC) should recommend that the California Environmental Policy Council, under the chairmanship of the Secretary of the California Environmental Protection Agency, undertake a public and open reevaluation of the 1998 University of California "Health and Environmental Assessment of MTBE" under the light of real world information and data.

References

1. **"The Social Cost of an MTBE Ban in California,"** August 2001, Gordon C. Rausser, Ph.D., University of California, Berkeley and Gregory D. Adams, W. David Montgomery and Anne E. Smith, Charles River Associates

2. **"Water Quality Impacts of MTBE: An Update Since the Release of the UC Report,"** August 2001, Malcolm Pirnie

3. **"So Why Are We Phasing Out MTBE?"** *a review of the study versus real world experience, Volume I, "Summary & Recommendations" from the UC Study, "Health & Environmental Assessment of MTBE,"* August 2001, James S. White, White Environmental Associates

4. **"A Probabilistic Assessment of Household Exposures to MTBE in California Drinking Water,"** 2001, Pamela R. D. Williams, Sc.D., Paul K. Scott, B.A., Patrick J. Sheehan, Ph.D., Dennis J. Paustenbach, Ph.D.,Exponent

5. **"MTBE in California Drinking Water: An Analysis of Patterns and Trends,"** 2002, Pamela R. D. Williams, Sc.D., Exponent

6. **"California Tank Program More Protective, the Proof Is In the Improvements and the Performance,"** July 2001, James S. White, White Environmental Associates

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Pat Perez - Williams Energy Services' Comments on the MTBE Phase Out in California

From: "Byers, Tom" <Tom.Byers@Williams.com>
To: <pperez@energy.state.ca.us>
Date: 3/1/02 2:49 PM
Subject: Williams Energy Services' Comments on the MTBE Phase Out in California
CC: "Heine, Bruce" <Bruce.Heine@Williams.com>

Attached below are the comments of Williams Energy Services on the Stillwater Associates report regarding the phase out of MTBE in California. We appreciate the opportunity to comment on the report and to make constructive suggestions for alternative solutions. If you have any questions or require additional information, please contact Bruce Heine at (918) 573-9056. Thank you.

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California Energy Commission
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Williams Energy Services' Comments on the MTBE Phase Out in California

Williams Energy Services ("Williams") appreciates the opportunity to comment on the recent report issued by Stillwater Associates for the California Energy Commission (CEC) regarding the phase out of MTBE in the state. Williams is a major stakeholder in virtually every sector of the energy industry. We produce, gather and process natural gas, manufacture petrochemical feedstocks for the plastics industry, refine crude oil, manage a nationwide refined products terminal network, produce renewable ethanol and operate retail travel centers. Moreover, we operate over 60,000 miles of pipelines across America and are a generator and marketer of electricity and other commodities. We would be directly affected if the CEC, other state agencies or the Governor made any change in policy regarding the MTBE phase-out.

Williams believes that Stillwater Associates and CEC staff should reconsider several base assumptions and an alternative solution prior to a formal recommendation to delay the MTBE phase-out. Williams believes that there are realistic alternatives to a delay of the Governor's existing schedule to phase-out MTBE. For example, the California Air Resources Board (CARB) should revisit existing Phase III gasoline regulations and make adjustments to the Predictive Model to accommodate *10% volume ethanol blends*. The additional supply of ethanol will offset a significant portion of the net volume shortfall projected in the report.

We will comment on three issues associated with the report:

Stillwater assumptions
Alternative solutions
MTBE phase-out and the impact of pending pipeline projects

Stillwater Assumptions

First, Williams does not agree with Stillwater's assumption that the entire gasoline pool in California will be blended with 5.7% ethanol. Based on that assumption, Stillwater has projected a loss of 46,000 B/D butane and pentane along with a volume loss of 10,000 B/D associated with "other losses to meet distillation specs"[1]. In fact, 80%[2] of California's gasoline pool is required to be oxygenated in 2003. Refiners and oxygenate blenders will make their blending decisions on a number of factors in attainment markets. Based on our ethanol marketing experience in various markets across the country, we cannot state with any certainty that refiners would voluntarily blend ethanol in attainment markets. However, if refiners and importers do opt to offer non-oxygenated gasoline in 20% of the state, the volume loss figure projected by Stillwater in table 3.1 should be reduced. If this is not the expected result i.e. that it will not have a positive effect on the supply volume, one must question why it was necessary to file for a waiver of the Clean Air Act's oxygen requirements.

[1] Page 18, table 3.1 Stillwater Associates MTBE Phase out in California
[2] California Energy Commission presentation February 19, 2002 Sacramento – slide 4

Second, we do not agree with Stillwater's assumption that CARB cannot make changes to the regulations that would have an impact on the projected shortfall. As discussed below, we believe that modifications to the Predictive Model are a viable option to enhance supply while protecting air quality.

Alternative Solutions

CARB Predictive Model Restrictions on Ethanol Volume

Table 3.1[3] of the Stillwater report highlights a net volume shortfall of 56,000 B/D after considering the effects of the MTBE phase-out and ethanol phase-in. First, the table is somewhat misleading since this data represents a summertime scenario only. As mentioned earlier, Stillwater has based its ethanol demand figure on the assumption that the entire state will blend 5.7% volume ethanol in its gasoline. Most stakeholders agree that ethanol volume will only rise to 5.7% due to the penalties imposed for an assumed increase in Nox in the Predictive Model on refiners who may choose to blend a higher percentage of ethanol. While recent data has been publicly submitted to the CARB from the Automotive Alliance that would justify a revision of the parameters that effectively prohibit 10% volume ethanol blends, no action has been taken. We suggest that CARB should consider amendments to the model that would allow 10% ethanol blends.

Again referring to table 3.1, Stillwater has projected 46,000 B/D of butane and pentane removal (summer months only) and 55,000 B/D of "ethanol addition". The primary reason for butane and pentane removal is compliance with CARB's RVP requirement in the summer months. While an increase from 5.7% volume to 10% volume ethanol will have a positive effect on the projected net shortfall, the RVP bump associated with ethanol blending peaks at around 2% volume ethanol. Therefore, an increase to 10% volume ethanol will provide the benefit of increased supply without the downside of a corresponding increase in RVP.

MTBE Phase-Out and the Impact on Pending Pipeline Projects

Stillwater has based the revised phase-out date in part on the start-up of a new pipeline from El Paso to Phoenix in 2006. This new pipeline leg would connect to the Longhorn Pipeline in El Paso and provide Phoenix with Gulf Coast supply. As a result, gasoline produced in southern California would no longer be transported to Phoenix thereby effectively increasing California supplies. [4].

As publicly stated during the February 19th workshop regarding this report, Williams is considering an additional refined products pipeline from El Paso to Phoenix. If the project receives Williams management approval, we believe that operations could begin as early as 2004. This assumes that Williams would have expedited approvals from the state and federal government and does not factor in any delays due to competitive or local factors. The state of California must recognize that an indefinite delay of the MTBE phase-out will have a negative impact on the economics of the proposed pipeline and may delay or derail the project entirely.

[3] Page 18, Stillwater Associates MTBE Phase out in California
[4] Page 21 Stillwater Associates MTBE Phase out in California

Summary

A delay of the MTBE phase-out and the continuation of Phase II Cleaner Burning Gasoline regulations will maintain artificial barriers for domestic ethanol market growth in California. Indeed, California, like other states needs to diversify its energy portfolio. Over the past 5 years, foreign crude oil imports into California have effectively tripled, from about 177 TBD in 1996 to nearly 500 TBD in 2000[5]. Renewable fuels like ethanol deserve a role in the states' 2003 energy policy today.

We appreciate the opportunity to provide our comments and to suggest alternative solutions.

[5] Stillwater Associates – MTBE Phase out in California. February 18, 2002

MTBE PHASE-OUT PUBLIC HEARING
FEBRUARY 19, 2002

Questions put forward to CEC Staff and Consultants

Mr. James White, of White Environmental Associates

- **Wouldn't it make sense to revisit the basis of the Governor's decision in the 1998 University of California MTBE study?**

- **Should California be risking these higher prices?**

- **Why are we still continuing down this path that's leading to greater gasoline costs and continuing uncertainty when there are new regulations establishing inspections of each underground storage tank once a year?**

Michael Greene, of CDS Consulting

- **Why don't you just phase out gasoline and replace it with E85?**

- **Is there anything California can do unilaterally to increase fuel efficiency standards in automobiles?**

- **What is the estimated cost of the mitigation of the environmental degradation that will occur from the continued use of MTBE over this rollback period?**

- **What is the cost of the stranded investments of ethanol producers not only in other parts of the country, but in the State of California?**

- **What is the estimated public cost of the removal of the barriers to fuel imports.**

- **Your assumption was that it was required, or would be required to be used in every place in the State of California. How will your projections change as a result of tweaking the formula?**

Steven Smith of Phillips Petroleum

- **I think the consultant certainly expressed that -- a hope and a desire that the Longhorn Pipeline would be obviously in place and the Kinder Morgan System would be looped. I think that's a pretty big assumption at this point.**

- **I would encourage the consultant to also look at federal legislation in place.**

- **We question whether the supply/demand picture would truly be any better two to three years from now.**

- **Some suggestions for the consultants would be to take a little deeper look at the action we've taken already.**

Brooke Coleman, of Renewable Energy Action Project

- **Why bio-fuels were not considered a part of the solution to this problem?**

- **I have a general question about whether there is a specific reason for not including some very serious costs to consumers related to not just pump prices, but public health and clean-up, as well.**

Jay McKeeman, of California Independent Oil Marketers Association

- **I feel have not been addressed adequately in the report, and one is the issue of unbranded supply in the state.**

- **I am concerned that there is a fair amount of assumption that everybody's going to have oxygenated fuel.**

- **I would suggest that you take a look at our class of trade and understand the economics of what a ban might do to us.**

Elisa Lynch, Bluewater Network

- **We wonder why the consultant hasn't considered a decrease in demand as a solution?**

- **Why haven't you considered the cost of MTBE use, continued use for three more years?**

Christine Stackpole, Associate Director of the Downstream Oil Cambridge Energy Research Associates - email letter

- **Comment on the actions taken to date within the California and downstream industry to prepare for the phase-out?**

- **What is the status of this, and what is the status of any terminal conversions to begin accepting ethanol?**

- **Where is ethanol being used in California?**

- **Why is it currently economic to blend some ethanol if there is excess MTBE availability?**

- **Is the challenge presented of storage capacity one primarily of added cost that the industry will have to incur, or one of time needed to add the necessary storage?**

- **How significant is the cost of adding new tankage?**

Mr. Peters

- **I think it is appropriate for the Energy Commission to give consideration to California taking a stand and providing a flexibility to California's refiners**?

- **We would suggest that it is appropriate for every pump in the State of California to have a sign on it so that the public knows what they're buying.**

Bruce Heine, of Williams Energy Services

- **If it's possible to allow a greater percentage of ethanol, that is quite common for the rest of the United States, to allow that here in California, then that seems to me to be a reasonable request to re-look at that through the Air Resources Board's current regulations.**

- **I would encourage Staff and those that wrote the report to take a look, and if ten percent blends were allowable here in California, what that would do to the implications of your overall end results and your end recommendations.**

Nick Economides, of Hart/IRI Fuels Information Services

- **We think that it may be advantageous for California to see what the national picture emerges, and to determine how California's best interests would be served in that scenario of supply and demand, before moving forward with that action.**

- **If you could comment on the availability of ships and the logistics.**

Mr. John King of the California Farm Bureau Federation

- **So I would like to suggest, and perhaps ask the study group if they've exhausted all their study potential as to what needs to be done to fill this logistic gap, whether they feel that more work can be done on the logistics side of getting the ethanol here to California.**

Mike Tinney, Tinney Associates

- **Why not recommend a change in the specs?**

Mr. Matt Williams, a resident

- **Is there any reason why there isn't a scenario with ten-percent ethanol as was used in the rest of the county?**

- **Recommend a fourth scenario examining the impact of ten- percent ethanol blend so that we can see what the full economic impact is.**

Steve Shaffer, Department of Agriculture

- **The predictive model needs to be addressed, and needs to be a part of the analysis.**

Neil Koehler, with Kinergy Resources for the Renewable Fuels Association

- **Ten percent ethanol blends, it is possible in the predictive model, as has been mentioned by the consultants, it is difficult under the current model to blend in ten percent ethanol. We need to take a look at the newest data and then recalibrate.**

- **The Energy Commission reports document that from 200 million to 3.7 billion gallons, of ethanol potential exists from Californian. Encourage the consultants here to incorporate that into further fine-tuning of this analysis.**

- **In the meantime, is there any reason why, if there is to be an extension, we shouldn't consider that to be only for summertime use, and that we have an MTBE ban in the winter months?**

Mr. Chad Tuttle Kern Oil and Refining Company

- **Kern Oil supports the key findings of the report that gasoline supply shortfalls will occur if the MTBE phase-out were to procedd as scheduled.**
- **Kern supports at least a ten-month extension of the MTBE phase-out deadline.**